

REMARKS

Claim 3 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite on the ground that the recitations "methyacrylate" and "methyacrylamide" do not comport with the chemical formulas depicted in the claim. Per the Examiner's suggestion, claim 3 has been amended to replace "methyacrylate" and "methyacrylamide" with "acrylate" and "acrylamide", respectively. Accordingly, this rejection should be withdrawn.

The Examiner has also rejected claims 1-4 and 10-22 under 35 U.S.C. § 103(a) as being unpatentable over *Sebag* (United States Patent 6,403,106) or *Mougin* (United States Patent 6,113,882). The Examiner concedes that neither *Sebag* nor *Mougin* discloses the use of water, C₁-C₄ alcohols or adjuvants in a proportion of at least 50% by weight of the dispersion. The Examiner contends, however, that "since the graft copolymer of the [claimed invention] can comprise between 0.1% - 50% of the dispersion[,] the adjuvants would comprise the rest [of the dispersion] which would be at least 50%. Official Action, pages 3 - 4. The Examiner also states that the "burden is shifted to the Applicant to show that the solvents listed in [the cited art] would not have the solubility parameters as listed in claim 1." Office Action, pages 4 and 6. Applicant respectfully traverses this rejection.

Sebag and *Mougin* are each directed to graft copolymers comprised of a stiff hydrophilic skeleton having flexible hydrophobic macromonomer grafts. *Sebag*, col.1, ll. 9-14; *Mougin*, col.2, ll.1-12. These graft copolymers are soluble or dispersible in "aqueous media or alcoholic or aqueous/alcoholic media based on lower alcohols." *Sebag*, col.3, ll.66-67 to col.4, ll.1; *Mougin*, col.3, ll.59-61. Moreover, the cited references are directed to aqueous-based cosmetic compositions, such as aqueous gels or aqueous nail varnishes, "which can be

easily removed under the action of an aqueous solution of surfactants." *Mougin*, col.1, 11.63-67 to col.2, 11.1-12; *Sebag*, col.1, 11.51-55.

First, the cited art does not disclose dispersions of a graft copolymer in the non-aqueous non-silicone media of the claimed invention. *Sebag* and *Mougin* teach graft copolymers which are "soluble or dispersible in water, the lower (C₁-C₄) alcohols, and mixtures of water and the lower alcohols." Plainly, these are aqueous media. See *Mougin*, col.1, 11.63-67, col.2, 11.32-34; *Sebag* col.1, 11. 51-55, col.2, 11.24-27. However, these lower alcohol solvents disclosed fall outside the scope of the present claims. Applicant directs the Examiner to paragraph [0018] of the pending application. There, the global solubility parameter " δ " (MPA^{1/2}) is defined as:

$$\delta = (\delta_D^2 + \delta_P^2 + \delta_H^2)^{1/2}$$

Applicant also directs the Examiner to the CRC Handbook of Solubility Parameters and Other Cohesion Parameters, previously submitted to the Patent Office on September 7, 2006, which explicitly indicates the solubility space parameters for water and various straight chain and branched C₁-C₄ alcohols as δ_T (where $\delta_T = (\delta_D^2 + \delta_P^2 + \delta_H^2)^{1/2}$). For example:

Solvent (Sebag or Mougin)	CRC Global Solubility Parameter $\delta = (\delta_D^2 + \delta_P^2 + \delta_H^2)^{1/2}$	CRC Reference page number
Water	47.96	161
Methanol	29.6	156
Ethanol	26.5	156
1-propanol	24.5	156
2-propanol	23.5	156
1-butanol	23.1	156
2-butanol	22.2	156
Isobutanol	22.7	156

According to this publication, neither water nor the C₁ - C₄ alcohols disclosed in *Sebag* or *Mougin* falls within the scope of the solubility space limitations. As such, the cited references do not disclose copolymer dispersions in the non-aqueous non-silicone media of the claimed invention.

Second, a person skilled in the art would not be motivated to supplant the water and/or C₁-C₄ alcohols of the cited art with adjuvants and additives to arrive at the claimed invention. *Sebag* and *Mougin* contain lists of possible adjuvants and oily cosmetic additives, such as waxes, various oils, and other fatty substances, which can be added to the solution or dispersion of graft copolymer. See *Sebag* Col.6, ll.63-67 to Col.7, ll. 1-11; *Mougin*, Col.6, ll.59-67 to Col.7, ll.4-7. The mere inclusion of these substances in the list, and their characterization as "adjuvants" or "additives", signify to those skilled in the art that they are being used in a non-primary role, e.g., to impart specific properties to a cosmetic composition. In fact, the cited art explicitly states that the adjuvants are used "to make [the dispersions] acceptable in a specific cosmetic application." *Sebag*, col.6, ll. 63-65;

Mougin, col.6, ll.59-61. By no means do the cited references suggest replacing a water and/or C₁-C₄ medium with an adjuvant or additive. In view of these particular terms of art ("adjuvant" and "additive"), a person of ordinary skill in the art would not have been motivated to make such a modification.

Finally, the solubility or insolubility of the polymer backbone and the grafted chains is determined by the medium in which the copolymer is dissolved or dispersed. The solubilities of the copolymers and the grafted chains of the claimed invention are the direct opposite of those in the cited art, as shown below:

	Sebag and Mougin (water and/or C ₁ -C ₄ alcohols)	Claimed invention (non-aqueous non- silicone medium)
Polymer backbone	Soluble	Insoluble
Grafted chains	Insoluble	Soluble

The result is a cosmetic composition having desirable properties, e.g. the formation of stable particles in a non-aqueous non-silicone medium without the addition of a stabilizing polymer. Application, paragraph [0007]. Certainly, there is no disclosure in the cited references to this effect, and more fundamentally, there is no teaching on how changing the medium would result in desirable properties.

In view of the foregoing, reconsideration and withdrawal of the rejection are respectfully requested.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

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If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

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